THE MODERN TREATMENT OF ECZEMA

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PREFACE.

In the following pages I have briefly pointed out the chief clinical varieties of Eczema; have sought to exhibit their etiology, so far as I understand it; have indicated the principal remedies found useful in the treatment of the disease; and have detailed the best manner of applying them, so far as known to me. That what has been written may prove useful to others, is the earnest desire of

THE AUTHOR.

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CHAPTER I.

ECZEMA.

DEFINITION.—*Eczema is an affection of the skin, of internal origin, sometimes made manifest through the influence of external causes, and characterized by the presence of vesicles, pustules, papules, or other lesions.*

DESCRIPTION.—Many cases of eczema look so unlike each other, that it is often difficult for one not familiar with the affection to trace even a form of resemblance. These differences are due to the fact that the disease may exhibit lesions quite dissimilar in character and appearance, and combined in ways and proportions almost without number. The aspect, also, of the individual lesions varies somewhat with the location they occupy, the degree of activity they present, and the period of time they have lasted.

As the successful treatment of the disease necessitates a proper appreciation of these factors, it will be well to analyze them in advance, and to briefly describe the essential varieties of the disease, and their principal modifications.

The varieties of eczema dependent on the primitive lesion are six in number, namely: erythematous, vesicular, pustular, nudose, papular, and fissured. These, in their progress, may exhibit infiltration, or scales, as secondary lesions.

Those dependent on the activity of the process are the acute and subacute; while those that run a brief course may also be termed acute, and those of longer duration, chronic.

Location influences the appearances presented by eczematous lesions, and the principal modifications are found in connection with the eruption as seen on the scalp, face, region of the head, hands and feet, genitals, and about the anus.

An acute eczema on the general surface commences with a local congestion or erythema, followed in a few hours by the appearance of one of the primitive lesions mentioned. If the lesion be vesicular, the congested surface is seen covered with a mass of minute but closely aggregated vesicles filled with clear transparent serum. It often takes a sharp eye, and even a lens, to distinguish their separate contours. The lesion consists in a large number of separate points, at which there is a slight elevation of the cuticle by a serous or lymphy exudation seeking an outlet. Rubbing, scratching, or other violence from without, or the pressure of the exudation from within, soon ruptures the thin epidermic covering, and in twenty-four or thirty-six hours, the vesicles are no longer seen, but instead, a raw and exposed surface, covered with exudation. If the part be exposed to the air, the watery portions of the exudation evaporate, and yellowish or straw-colored crusts remain. As the exudation continues, the crusts thicken, until

they drop off or are purposely removed. After a varying time (days or weeks, as the case may be) the exudation diminishes in quantity, the crusts cease to form, and an attempt is made to cover the part with a new layer of horny epithelium. It may be weeks before this effort is entirely successful, and the affected part presents, in the interval, a reddened surface covered somewhat loosely with attached scales of small size, the scales consisting of newly-formed epithelium, which has not yet attained a normal character and consistence.

For practical convenience, the course above described may be divided into three stages, the first being that of congestion and vesicle formation, the second, that of exudation and crusting, and the third, that of dryness and scaling.

The *pustular* variety of eczema pursues the same course and passes through the same stages as the vesicular, or differs from it only by the appearance of minute aggregated pustules instead of vesicles in the first stage, and more or less purulent exudation with greenish crusts in the second. The third stage is identical in both varieties.

The *nudose* or *exfoliative* form, as I have elsewhere* called it, differs from the preceding varieties by the fact that neither distinct vesicle or pustule for-

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*Elementary Treatise on Diseases of the Skin, 1876, page 149.

mation is observed, but instead a rapid shedding or exfoliation of the horny layer over the whole or greater part of the affected area. The succeeding exudation may be serous, sero-purulent, or purulent, and crusts will form as already described. The second and third stages of the nudose variety are not distinguishable from the same stages in the preceeding forms.

In the *papular* variety an area of congestion becomes the seat of small aggregated or scattered papules, with little if any tendency to exudation. If scratched so as to wound the papules a little serum exudes, drying into thin pellicles or laminæ. The papules after a time subside, and the skin becomes normal without the appearance of the distinct scaling met with in the forms already described.

The *fissured* variety is characterized by a more or less reddened surface without vesicles, pustules or epithelial exfoliation, but presenting small cracks or fissures extending through the stratum corneum and sometimes through the stratum malpighii as well. Exudation is slight, crusting is absent, and the skin returns to the normal by simple closing of the fissures and disappearance of the congestion.

Eczema varies in different cases in respect to the grade of inflammation present. In one it may exhibit great activity, and be accompanied with decided heat, high color and other evidences of marked inflammatory action. On the other hand the natural color may be but slightly altered, the increase of local heat

almost inappreciable, and the general process of a torpid or sub-acute character.

In some cases an eczema may run its course in a few days or weeks, while in others it may be prolonged for months or years, constituting the chronic form of the affection. Infiltration is a frequent accompaniment of this condition.

The *location* of an eczema influences to a certain extent its appearance as well as leads to modifications of the treatment. For this reason we will here note the most important variations of the former.

In eczema of the scalp especially in infants or children the exudation is frequently profuse, and drying, mats together the hair in a tangled mass, offensive to both sight and smell. If by chance pediculi find lodgment on such a scalp they multiply rapidly, and by their irritation aggravate and increase the trouble. Furuncles and small abscesses may further complicate the matter.

On the face in infants we usually encounter an active form of inflammation accompanied with a good deal of heat and pruritus. The eruption assumes the vesicular, pustular, or nudose forms, and when it extends behind the ears, fissures often form.

In adults the eruption may be purely erythematous without exudation.

In adult males the region of the beard sometimes becomes the seat of eczema, which may be purely superficial, or, on the other hand, may descend

into the hair-follicles and involve the root-sheaths in the inflammation.

When the palmar and plantar surfaces are invaded by eczema the primitive lesions are most frequently vesicles or fissures. The vesicles, however, owing to the thickness and strength of the stratum corneum in this region do not rupture easily, and may go on for several days increasing in size, often attaining a magnitude four or ten times that of eczematous vesicles on other parts.

Fissures form by preference at the flexures of the small joints and where the natural skin-lines are most pronounced.

The *mons veneris* may be the seat of the vesicular or pustular forms with involvment of the hair follicles, but the penis and scrotum more frequently present the erythematous variety, and if the affection become chronic, infiltration to a marked degree is usually met with.

Eczema about the anus is frequently marked by radiating fissures of greater or less depth.

The inner aspect of the thighs is the favorite location of the papular form, and is often accompanied with diffuse infiltration between the papules.

On the lower extremities, below the knees, eczema is frequently encountered as a direct result of varicose veins. If these latter have given rise to ulcers, a broad and diffuse zone of erythematous eczema will

almost always surround them, with scattered patches on neighboring parts.

From the foregoing, it will be seen that location influences to a certain extent the form of the primitive lesion, and that all parts are not equally predisposed to the six varieties we have noted; a fact of importance when we come to the question of treatment.

CHAPTER II.

ETIOLOGY.

It may be regarded as almost axiomatic that the better you understand a disease, the better you will be able to treat it. This is especially true as regards the disease under consideration. Occasionally cases of acute eczema will be met with that readily recover under the simplest application, even under the influence of a non-medicated protective dressing. Unfortunately these cases are rare, and in the chronic form it is often necessary to avail yourself of every possible aid to recovery.

A thorough appreciation, therefore, of all the causes of the eruption, both actuating and contributory, cannot fail to greatly assist the therapeutist in the proper selection of the remedial agencies applicable to a given case.

It is true that very little is absolutely known as to the etiology of eczema, but sufficient facts have been observed in connection with the development of the disease to warrant certain inductions that in practice yield very satisfactory results.

The modern German writers, as a rule, give this branch of the subject but scant attention, saying at most that certain assigned causes of the disease have no real existence, other than such as may be classed

as external irritations of a mechanical, chemical, or thermic nature.

The French writers, on the other hand, appear to give an undue prominence to the constitutional causes and undervalue the influence of external agencies. The truth appears to the writer to be between the two. Eczema is a disease which arises as a consequence of certain derangements or peculiarities of internal origin, and often, and perhaps generally, brought to the surface and made manifest through some source of external irritation. In other words, two classes of causes, predisposing and exciting are necessary for the production of the eruption in the vast majority of cases. No form of external irritation known to the writer is capable of exciting a true eczema in a perfectly healthy individual. *Per contra* the constitutional predisposition in a given case must be very strong indeed to be alone capable of causing an outbreak of the eruption. That this, however, sometimes occurs is admitted, I believe, by most observers who have taken the pains to investigate these cases from this standpoint.

The French writers of the school of Bazin and Hardy attribute eczema to certain diatheses to which they give the names herpetic and arthritic. The latter they assume is essentially the same as that which gives rise to sundry joint affections of a rheumatic or gouty nature. The herpetic diathesis they fail to define with any degree of clearness. Hardy combines

the two under a single name, and regards the "dartrous" diathesis as the predisposing element in eczema. Of this diathesis he gives in detail the main clinical features but fails to elucidate the rationale of its existence.

Ten years since, the present writer* elaborated this subject and sought to give more precision to the somewhat vague notions of his predecessors in this field. The views he then advanced he still holds, and they may be succinctly stated as follows:

Eczema depends on a constitutional derangement or diathesis, hereditary or acquired, and of indefinite duration. It is characterized by the retention and accumulation in the blood of an undue amount of certain excrementitious substances, which normally should be removed by the kidneys as fast as formed. This accumulation may be due either to deficient functional activity on the part of the kidney, or on the other hand to excessive formation of the substance in question, the kidneys acting normally and doing their share of the work of purification. The peccant material I believe to be in the main uric and oxalic acids, with probably other less known products of imperfect oxidation. Urea represents the highest degree of oxidation of the products of assimilation and disassimilation, while uric acid repre-

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* Elementary Treatise on Diseases of the Skin, New York, 1875.

sents a lower degree of oxidation. Urea is extremely soluble and is excreted by the healthy kidneys with great ease and readiness. Uric acid is extremely insoluble and is excreted with difficulty and in extremely small quantities only, and any attempt to overtask the kidneys in this direction not infrequently, I think, leads to that form of irritation which results in the the so-called "gouty" kidney. Oxalic acid standing alone is exceedingly soluble, but its affinity for lime leads to the formation of the very insoluble oxalate. If this latter enters into combination with a protein compound, as is very probable, its excretion by the kidneys is well nigh impossible.

Carrying the matter still further back, we seek the causes of the deficient oxidation of the nitrogenous elements of the blood and tissues. These causes will be found, if we agree with Ben Jones,* to reside in the liver, which organ he considers the chief seat of the oxidizing process.

To the liver, then, we must look for the primary causes of the trouble, and anyone who will clinically investigate cases of chronic eczema from this standpoint, will be surprised at the number of patients who will exhibit symptoms pointing to this organ. The causes of hepatic derangement capable of influencing the functional activity of the organ, are doubtless

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* Lectures on Some of the Applications of Chemistry and Mechanics to Pathology and Therapeutics, London, 1867.

manifold, and we cannot undertake their analysis here, other than to refer to a single one, which should not be overlooked. I allude to malaria.

The late Dr. L. P. Yandell, of Louisville, expressed the opinion that the majority of cases of eczema were the outcome of malaria. We cannot go to quite the same length that he did, but nevertheless, are convinced that very many cases are due directly to it through the chain of causes just enumerated.

The local exciting causes are numerous. A stimulating or slightly irritating poultice or lotion may provoke an outbreak of the eruption at the site of application. Undue exposure of a part to the effects of heat, natural or artificial, may do the same. Irritant dust or other particles accompanying certain mechanical operations and occupations, may induce a like result. Scratching and certain applications used in the treatment of scabies, may also provoke a secondary eczema. In many, and in the writer's experience, in the majority of cases, however, it will be impossible to ascertain the local cause that specially induced the outbreak.

The actuating cause sometimes appears to be of internal origin. A fit of indigestion, too generous living, or a bottle of wine, in those strongly predisposed to eczema, often seems sufficient to precipitate the eruption.

CHAPTER III.

TREATMENT.

In a disease which may present so many different phases as regards appearance or lesion; that may occur in all shades of general constitutional vigor or debility, that may be met with in connection with almost every other organic or functional affection, it is hardly to be expected that any one form of routine treatment will meet with frequent success. Such an expectation would be at variance with the known laws of pathology and with universal experience in most other forms of disease.

In eczema treatment will be successful just in proportion as every feature in each individual case is fully appreciated, and its indications provided for.

The task that the physician has before him is two-fold. He must remove the existing lesions as speedily and thoroughly as possible, and he must so alter the general constitution or habit of the patient as to diminish, and perhaps abolish, the tendencies to relapse. As a rule, the former indication is the one most easily and readily fulfilled, while the latter may require months or years of constant attention. The one may be likened to occasional skirmishes that take place between two opposing armies, while the other more closely resembles the well elaborated campaign, or the well-studied siege of a fortress. It not

unfrequently happens, moreover, that when the disease exhibits a chronic or persistent form, both modes of attack must be brought into play before the lesions will show the slightest indications of yielding.

The best hopes for success lie in a comprehension on the part of the physician, of every detail connected with the causation and continuance of the eruption in a given case, combined with a knowledge of the therapeutic agents and agencies that experience has shown most effective against them. It is these points that the author desires to set forth to the best of his knowledge and ability in the present treatise.

To fully display the various therapeutic agencies that may be brought into play against the different manifestations of the disease, it is expedient to analyze and group them. This we shall do under the following heads:

Hygienic.
Etiological.
Diathetic.
Internal.
External.

Hygienic.—In exceptional cases of eczema the patients present no obvious deviation from robust health, and correct habits. They are hearty and strong, with good appetite and digestion. Their bowels are regular, and their sleep is natural and refreshing. They have an abundance of wholesome food

with plenty of fresh air and regular exercise. In fact, from a hygienic standpoint, they appear to lack nothing.

Naturally, under these circumstances, the physician has nothing to change, and he must combat the affection by other means. In most cases, however, this state of affairs does not exist. Among children, both of the rich and of the poor, insufficient or improper food may be the chief unhygienic condition. The nutritive value of the mother's milk does not always correspond with her social position or her bank account. The nursling of the poor partakes of the breast and also of its parent's table, sharing with the older members the customary beverage (tea, coffee, or beer), and testing its early teeth on corned beef and cabbage. The nursling of the rich supplements the maternal font with the various mother's milk substitutes and patent foods with which the market abounds.

The laborer's child of two or three years', shares the ordinary and common food of the family, while the child of the rich may be stuffed with sweets and confections of all kinds.

The child of the poor lives and sleeps in dark and unventilated tenement-house apartments, to which fresh air and sunshine rarely gain entrance.

The child of the rich, on account of some supposed delicacy, is often confined to the house for days or weeks at a time during the colder seasons, for fear

that exposure to the cold or wet may bring on some serious or fatal ailment. In the inclement season the child of the poor is frequently insufficiently clad; while its rich brother is usually clad too much.

Among the adults of the laboring classes ill-ventilated sleeping apartments appear to be the chief malgenic factor; while among the well-to-do, too free indulgence at the table, and especially as regards nitrogenous food, with too little bodily exercise, is not infrequently the hygienic condition that needs most attention.

If these facts are borne in mind, it is not a difficult matter to suggest the requisite changes that should be made in the patient's way of living. It is much more difficult, however, to have your recommendations carried out in full.

The diet of eczematous infants is almost always found lacking in the fatty elements. The mother's milk will be found deficient in cream, and should be be supplemented in this respect by extraneous supply. When cream is not conveniently attainable, cod-liver oil may be used instead, and, as a rule, little difficulty will be met with in giving it, despite the taste usually so nauseous to adults. Infants and young children will generally take it without difficulty, especially during the colder seasons, when the need of it is greatest. Many children will be brought you who are plump and apparently well nourished, but in whom an eczema of the scalp or face will exhibit most persistent

tendencies until the patient's diet has been amended in the manner suggested. It may be taken as a general rule, therefore, that cod-liver oil or some equivalent, is of the first importance in the treatment or management of eczema in children.

It need not be urged that clothing should be suitably adapted to the seasons. Not unfrequently, however, it will be found that the fault lies in excess rather than deficiency in this respect, and children will be brought you bundled up with flannels and wraps to such an extent that the body is being constantly kept in a sweat-bath, a condition by no means to be desired. Sometimes flannels are a cause of irritation, and when such is the case should be separated from the skin by a thin undergarment of muslin or linen.

Fresh air and well ventilated sleeping apartments should not be forgotten, and regular and sufficient exercise should be provided. As a rule children need no urging in this respect. They will romp and play in-doors and out, to a degree (if permitted) that will freely satisfy all of nature's requirements. With adults, however, it is different. Many if not most cases of chronic eczema will be found in those who either can not or will not take sufficient exercise. Amendment in this respect is of course necessary.

Bathing sufficient to meet the requirements of cleanliness should be insisted on, but too frequent or

profuse use of water is not advantageous. Eczematous lesions, especially those belonging to the second stage of acute cases are very intolerant of water. An eczema in which the surface is raw and discharging is always made temporarily worse by the application of water; and the reason for this is manifest. The stratum corneum being absent, the underlying cells of the stratum malpighii are exposed. These cells are soft and succulent and rapidly absorb water when in contact with it, due to endosmatic action, the water having a lower specific gravity than blood serum. The absorption of the water causes the malpighian cells to swell, and some of them perhaps to burst; the result of which is manifested by increased redness, swelling and irritation. Water then should not be applied to an exuding eczematous surface oftener than is absolutely necessary. The irritant effects of the water, however, may in a measure be controlled by the addition of a little glycerin or a small quantity of some neutral salt, and the best for the purpose is probably the chloride of sodium—in the proportion of an ounce or so to the basin of water. In subacute and chronic eczema, when the stratum corneum is present, though of course not in a normal condition, baths are frequently of service. A full bath at night with a pound of carbonate of soda added to the water will often exert a sedative influence, and allay the itching. In other cases ten or twelve pounds of common salt to the full bath will exert a stimulant action

on a sluggish eczema, and tend to promote the cure, and sometimes it will very decidedly control the pruritus.

Etiological.—It is an old saying that when the cause is removed the effect disappears. However this may be in mechanics and physics, it is far from always being the case in medicine. A striking illustration of this proposition came under notice a short time since, in the case of a nursling who had been vaccinated some seven or eight months previous. The vaccination had pursued its usual course, but as it healed an eczema appeared at its site (deltoid insertion) completely surrounding the point of inoculation. At the time of observation it presented a circular patch of moist eczema about two inches in diameter. This had existed almost without change for nearly seven months. Now, in this case there can be hardly a doubt that the vaccination was the local etiological factor, the eczema corresponding to the inflamed areola about the vaccine vesicle. In many cases of eczema of the hands in washerwomen and scullions excited by too frequent insertion of the hands into strongly alkaline water, the affection will often persist in the most annoying way even after discontinuance of the practices which excited it. Scabies is sometimes the exciting cause of an eczematous eruption, which may persist long after every acarus has been destroyed. Many other local irritations may excite an outbreak of eczema, and just in proportion as their

influence has been prolonged, will the eczema prove obstinate and unyielding, even after their direct action has ceased. All possible local causes, however, should be sought for and remedied.

Diathetic.—The diathesis underlying eczema is as we have already noticed a general condition characterized by deficient oxidation and sluggish action of the organs concerned in this process. It matters little at which end of the chain we commence, as the indications are clear, and fortunately we are in possession of means by which they may in great measure be fulfilled.

The blood is surcharged with excrementitious principles that should be carried out more rapidly than the emunctories are at the moment doing, and the rational indication therefore is to stimulate these organs to a little extra duty. If the kidneys are in a normal condition they will readily respond to diuretics. Among these acetate of potash, small doses of iodide of potassium, squills, caffein, and drugs of similar action, have appeared to the writer to yield excellent results. The excretion of uric acid may be further promoted by the use of alkalies. Of these liq. potassæ is perhaps the most effective, but it must be used with discretion, and for short periods of time only.

There is one drug, however, that enables us to fulfill the double indication for an alkaline diuretic, namely, the benzoate of lithia. This may be given in doses of from three to five grains, preferably in water

and a short time before meals. A long continuance of alkalies, however, tends to deglobulize the blood, and consequently their administration should be interrupted from time to time, and hematogenic remedies substituted. A very convenient plan is to give some form of iron with the alkali, and my own favorite is the benzoate of iron mixed with the benzoate of lithia. Iron is unquestionably of benefit in many cases of eczema, and the possibilities of its requirement should not be overlooked.

Sometimes in long-standing cases of eczema in patients advanced in life, the kidneys will not be found in a condition that will warrant the throwing of any extra strain upon them. If the patient be of a clearly gouty constitution, the condition of the kidneys should be carefully ascertained, and stimulating diuretics avoided if there be any indications of cirrhosis of these organs.

Under these circumstances depuration must be sought through the medium of the bowels and skin. Laxative mineral waters appear to be the best agents to employ under these circumstances.

The skin may be stimulated to the performance of depurative functions to a slight extent by means of the diaphoretic action of heat, as in the regular Turkish bath, or by means of suitable home-made contrivances, which are cheap and equally effective. It is only in long-standing and very sub-acute cases, however, that sweating should be encouraged. In

acute disease it will aggravate and tend to increase the area of the eruption.

The next point to consider is the influence exerted in any given case by the greater or less functional inactivity of the liver. In a very large proportion of long-standing cases hepatic torpor is clearly evident; sometimes as the result of old malarial disease, and sometimes, doubtless, from hereditary predisposition. In either case this tendency must be combatted and remedied if possible.

Among the drugs useful in this connection are mercury and the other reputed cholagogues. My own custom is to commence with a good purgative dose of calomel and jalap, to be followed by repeated small doses of the milder preparations of the drug. Blue pill, or mercury with chalk or in trituration with sugar of milk are convenient and efficacious, and will often be found of extreme utility in the eczemata of children.

If for any reason it is not thought desirable to give mercury, the vegetable cholagogues, podophyllin, irisin and eupatorium may be employed. My own preference is in favor of eupatorium. This I commonly prescribe in the form of fluid extract in doses of from ten to twenty drops in water, night and morning.

The diet of eczematous patients is of the first importance. As a rule you will find that in adults their tastes are decidedly carnivorous, and that they

eat a good deal of meat with a very scant quota of vegetables. Many of them, especially men, are fond of the pleasures of the table, and indulge much more freely than there is any necessity for. As these matters are under the control of the patient himself, no pains should be spared to impress on him the necessity for a change in his habits. It is not wise to cut off the supply of meat absolutely, but it should be very decidedly restricted, and a larger proportion of bread, vegetables, and the various cereal preparations substituted.

Patients often fancy that diet of this sort will reduce their strength, and incapacitate them for the amount of labor that their daily avocations necessitates. These fears are groundless, and on trial will soon be dissipated.

Direct internal treatment.—There are three drugs which appear to directly influence the course of eczema when administered internally. These are arsenic, calx sulphurata, and viola tricolor. We will first consider their various preparations and modes of action.

Arsenic.—The preparation of arsenic most in vogue is unquestionably the liq. potassii arsenitis, or so-called Fowler's solution, named after an English physician who first brought it into use as a remedy for intermittent fever. As now prepared it contains a number of other ingredients, which are unnecessary, and I think a positive disadvantage. A much better

preparation, it has seemed to me, is the liq. sodii arsenitis, which is a simple solution of the salt in distilled water. This latter preparation is somewhat weaker than the former, containing one grain of the salt in 100 parts of solution, while the liq. potassii arsenitis contains one part of *arsenious acid* to 100 parts of solution. My own preference, however, is in favor of arsenic in substance, rather than solution. When given in this manner it should be administered in a state of minute subdivision, which can but be accomplished by trituration with some hard inert substance. Thus far sugar of milk has proven the most useful medium for this purpose. Assenious acid thoroughly triturated with sugar of milk in any desirable proportion may then be made into pills or tablets. These latter are always reliable while grave charges of insolubility, etc, have been brought against some of the pills found in the market.

The useful dose of arsenic in eczema varies within very large boundaries, dependent, on the one hand, on the age of the patient, and on the other, on the condition and character of the eruption. It may in general be stated as between $\frac{1}{100}$ and $\frac{1}{20}$ of a grain, while in exceptional cases as much as $\frac{1}{10}$ of a grain can be given with advantage to the eruption, without injury or inconvenience to the patient. Naturally the younger the patient the smaller should be the absolute dose, but it has been observed that children will bear

relatively larger doses of arsenic in proportion to age than they do of many other drugs.

The character of the eruption, or rather the acuity of the lesions influences the choice or rejection of this drug, and regulates the size of the dose more, perhaps, than anything else. Arsenic is a stimulant to the skin, exerts a specific action on it, and is itself capable of producing various eruptions.* Manifestly, it needs to be handled with discretion. As a general rule, it may be stated that arsenic is absolutely contra-indicated or harmful in acute eczema. In sub-acute and chronic conditions it may sometimes be employed to advantage. In the first stage of eczema it is useless, as I have never seen it either abort or appear to shorten the duration of the eruption When given at this time. In an *acute* eczema in the second stage with exudation and crusting it will almost invariably aggravate the eruption, increasing its extent, and adding to the severity of the inflammatory symptoms.

In the second stage of a *subacute* eczema, however, where the action, though persistent, is sluggish, arsenic in moderate doses is certainly of service. It may be given on commencing in doses of $\frac{1}{50}$ grain, which will generally permit of increase. If from any cause whatever acute symptoms should set in, the arsenic must be suspended, and not resumed.

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* For a detailed account of the eruptions produced by arsenic see my Materia Medica and Therapeutics of the Skin. 1881. P. 23.

In the third stage of eczema without exudation, but with a glossy skin covered with fine scales, arsenic exerts its greatest influence for good. Here the dose may be larger, and the longer the eruption has lasted the larger the dose. The initial doses should be moderate, but rapidly increased until the limit of tolerance is approached. Gastric irritation and swelling of the eye-lids or feet indicate that too large an amount of the drug is being given.

During the administration of arsenic the urine should, from time to time, be examined for albumen; and, if this is detected, the drug should be discontinued, as the integrity of the kidneys is of greater importance than the speedy cure of the eruption.

In cases where the patches of eczema are characterized by great infiltration, arsenic has not, in my hands, proven very serviceable.

Calx Sulphurata.—This drug exerts an unquestionable influence in eczema, and can be used to advantage in several different conditions. In cases of eczema rubrum, especially in infants and children with much soreness and irritation, calx sulphurata, in small doses (gr. $\frac{1}{50}$ to gr. $\frac{1}{25}$ for children), often proves of great service. Again, in cases in the second stage, when the exudation is abundant and purulent, it should be given in larger doses, gr. $\frac{1}{20}$ for children, to gr. $\frac{1}{5}$ for adults. Thirdly, it may be used with very manifest advantage when the patches of eruption are greatly infiltrated, and the inflammation is of a

sub-acute character. We have more than once seen the thickened skin in chronic eczema of the leg apparently melt down under the influence of this drug, given in full doses, gr. ¼ to gr. ½, three or four times a day. Its effects are frequently appreciated within a week or ten days. If they are not evident, however, at the end of two weeks, it will not be worth while to continue the drug longer, but use instead, measures to be mentioned later.*

The preparation of calx sulphurata that I generally prefer, is the tablet made from the trituration, as I have frequently been disappointed in some of the ready-made pills.

Viola Tricolor.—Although of high repute in the last century in the treatment of eczema, this drug has received but little attention during the last half century. German dermatologists profess to regard it as absolutely inert, but Hardy and other French physicians speak highly of it. My own experience with it has been large, and covers a number of years, and the drug has certainly seemed to me to merit the encomiums of its advocates.

The preparations that are most useful are the infusion and the fluid extract. They should be made from a good quality of the imported herb, and the

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* For a more complete account of the uses of calx sulphurata, the reader is referred to an article on the subject, in the Jour. Cutaneous and Venereal Diseases, January, 1883.

fluid extract should be made with very dilute (25 per cent.) alcohol.

Viola tricolor has a very decided action on the kidneys, increasing the amount of urine, and the total quantity of solid excreted with it. It is possible, therefore, that a part of its effects are due to its depurative action. Other diuretics, however, do not seem to posess all of the powers exhibited by this drug, and cannot completely fill its place. Its usefulness in eczema has a very wide range, but is specially marked in the eczema capitis of children, the so-called crusta lactea or milk-crust of the older writers. Vesico-pustular eczema of the scalp and face of moderate severity, but with persistent tendencies is of frequent occurrence, and it is in these cases that viola produces the most decided effects, as any one may ascertain who tests it. To obtain the most benefit, the dose should be selected with care and judgment. In this respect it is impossible to do other than lay down a general rule, which may be stated as follows: Too small a dose will, obviously, be without result, while too large a dose will make the eruption, for the time, at least, very much worse, increasing the extent and severity of the lesions. The more acute the eruption, the smaller should be the dose; while the more subacute and indolent, the larger it should be. In acute cases a single drop of the fluid extract twice or three times a day, is often sufficient for infants, while five drops may be enough for adults in similar

conditions. On the other hand, if the affection be indolent, the dose may be very considerably increased, even up to a teaspoonful to adults. When viola is prescribed for the first time in any given case, it is almost impossible to predict its effects, and my custom is to direct the patient to increase the dose if after three or four days the eruption is unchanged ; or, on the other hand, if it should appear to be getting decidedly worse, to discontinue the drops for a few days and then resume them in smaller doses and at less frequent intervals. In the dry eczema capitis of adults, viola in twenty- or thirty-drop doses is very often of great service. In fact, its action in many respects closely resembles that of arsenic, and the principles of dosage are substantially the same in both. It has this advantage over arsenic, however, that too large doses never do more than temporary harm. In eczema with great infiltration, viola tricolor has not appeared to me to be of much service.

The three drugs here mentioned are the ones on which I chiefly rely in the internal treatment of the lesions of the disease in contra-distinction to the constitutional conditions which precede or accompany them. Both classes of treatment may often be pursued simultaneously ; and which should be predominant or entirely omitted is simply a question of judgment.

Eczema may occur in connection with syphilis, and very frequently in combination with that ill-

defined condition to which we give the name of struma. In either case, treatment adapted to these conditions should be employed in connection with the special treatment of the eczema.

I have never been able to perceive that the co-existence of syphilis and eczema has led to any modification of either disease, whether the syphilis came before or after the disease, and syphilis in no wise tends to prevent the occurrence of eczema in those who are subject to it.

In patients posessing a marked strumous constitution, the ordinary anti-strumic remedies, such as cod-liver oil, iodide of iron, lime, etc., should be freely given in conjunction with appropriate local treatment.

CHAPTER IV.

LOCAL TREATMENT.

The local treatment of eczema involves the employment of various lotions, ointments, oleates, oils, colloids, powders and soaps. A very formidable list of these might be given, but I shall confine myself to those with which I have had a favorable practical experience.

Lotions.—The first of these is the well-known black wash, which I prefer to use made in the proportion of one part of calomel to thirty or forty parts of lime water. The mixture should be shaken before use, and is applicable at the earliest stage of the acute form of the disease, when the primary congestion is present and the vesicles are about to form. Even after rupture and during the second stage black wash will often greatly modify the intensity of the inflammation, and relieve the subjective symptoms. Of still greater value during the first and second stages, and especially if the exudation is abundant and purulent, is a drug, or rather a simple chemical compound which thus far has obtained but little practical recognition. I allude to the solution of peroxide of hydrogen. This substance was formerly difficult to make and expensive. It is now manufactured on a large scale for technical purposes and is quite cheap. Its only inconvenience is its liability to decompose when

kept in a warm place and thereby lose its strength. If the bottle be placed in a refrigerator it will keep its strength indefinitely. Robbin's (English) solution contains nine volumes of peroxide, while Marchand's (American) is usually sold of the strength of twelve volumes, and is about half the price of the former. The twelve volume solution is too strong to apply undiluted in many cases of eczema, especially in children, producing an undesirable degree of irritation and reaction. It should therefore be diluted with from two to five volumes of water, increasing the strength as the patient is found to bear it. The effect of the solution of peroxide of hydrogen in many cases appears almost magical, reducing the purulent exudation and permitting the formation of a new epithelium.

Dilute alkaline lotions, especially a solution of the carbonate of soda, are useful for cleansing purposes and to a certain extent for the relief of pruritus.

Strong alkaline applications of liq. potassæ, pure or somewhat diluted, green soap and its solution in alcohol have a distinct function to perform in the reduction of thickened epithelium in eczema of the hands or feet, and in the removal of infiltration. If a patch of greatly infiltrated eczema be painted with liquor potassæ, in a few moments little droplets of serum will be seen upon the surface; if these be wiped off, fresh serum exudes, and this continues for some minutes. When the tendency to exudation

ceases the parts should be wiped dry, and a sedative ointment applied. The application is repeated on the second or third day according to the degree of irritation produced by the first application, and this is continued until several applications have been made. The result will be notable diminution of the infiltration.

Ointments.—The ointments most in vogue are the ungt. zinci oxidi, ungt. hydrarg. ammoniati, ungt. hydrarg. nitratis, ungt. diachylon, ungt. picis liquidi, and ointments containing carbolic and salicylic acids. Of these the zinc ointment is probably inert so far as any direct medicinal effect is concerned. It is simply a protective, and as such serves an admirable purpose, especially in cases of extensive disease, where it would be neither safe nor prudent to employ the mercurial preparations. If the base of the ointment contained a little wax instead of being made with lard only, it would be still better. The benzoin, however, which it contains, tends to preserve it from rancidity, and undoubtedly exerts a slight beneficial influence. When a decidedly sedative effect is desired, I am in the habit of adding to each ounce of the ointment half a drachm of the fluid extract of belladonna, or a drachm of the fluid extract made from fresh stramonium leaves. Ungt. diachylon resembles zinc ointment in its general effects, but as it possesses few, if any, advantages over it, and is rarely well made, it has not come into very general use.

Ungt. hydrarg. ammoniati, either alone or with the addition of a little stramonium, is more effective as a curative agent than zinc ointment, but must be used with a certain amount of discretion, and should not be applied to extensive surfaces for fear of mercurial intoxication. In some cases it irritates if used of the full officinal strength, and should, therefore, be diluted. In a few instances I have known it to produce active dermatitis.

Ungt. hydrarg. nitratis is more stimulating than the ungt. hydrarg. ammon., and should usually be diluted with one or two parts of lard.

Ointments containing from five to ten grains of carbolic acid are used, and will sometimes control the itching better than anything else.

The second stage of eczema with exudation and crusting is the period when the ointments mentioned are of the most service. After removal of all crusts and careful drying of the surface, the ointments may be smeared on the part, or applied on muslin and bound on. The salve-muslins of Dr. Unna, of Hamburg, which consist of a loosely-woven fabric like thin cheese-cloth or gauze, thickly impregnated with the ointment, are exceedingly convenient when a fixed dressing is desired.

The frequency of application or of the dressing will depend in great measure on the amount of discharge. Sometimes the applications will require removal night and morning, and sometimes but once

in twenty-four hours. As a rule the part should be disturbed as little as possible, and the dressings removed only when necessary.

Ungt. pici. liquidi and ointments containing oleum cadinum, oleum rusci, and similar empyreumatic substances, play quite a different part in the treatment of eczema. They should never be used in the first or second stages of the disease, or when acute conditions are present. In the third stage, however, when the skin presents a dry and scaly surface, covered with new but imperfectly formed epithelium, and especially if the affection is indolent, these preparations are of the utmost service. Tar mixed with four or five parts of turpentine may be used instead of the ointment, and rubbed once or twice a day into the affected parts. Instead of turpentine, however, I usually employ the *oleum pini sylvestris*, and have the mixture perfumed with oil of lavender or citronella.

Oleates.—The oleate of zinc as a dry powder or an ointment is used by many in the place of zinc ointment, but I have never been able to perceive that it possessed any special advantage over the latter preparation. The oleate of mercury is a direct stimulant and occasionally useful. Its strength should not be greater than one per cent.

Collodions.—Contractile collodion will sometimes, I believe, abort a threatened eczema, and prevent extension from one already existing if applied around the margin of the lesion. Flexible collodion is pro-

tective only, and is sometimes useful when the exudation is slight. Cantharidal collodion is sometimes employed as an application to an old and obstinate local patch which it is desired to stir up to some degree of activity. Occasionally it hastens a cure; more frequently it does more harm than good. Collodion medicated with chrysarobin, a remedy of such marvellous efficacy in psoriasis, is of comparatively little value in eczema, although the local conditions are often quite similar. Collodion with five per cent. of iodine will often prove of service in chronic thickened patches. Collodion with three or four per cent. of salicylic acid will dissolve and remove thickened epidermis from the hands and feet more quickly, perhaps, than any other drug; mechanical means, however, are generally preferable.

Traumaticin is the name in common use to designate a ten-per-cent. solution of gutta-percha in chloroform, and it possesses many advantages over collodion for some purposes, and I sometimes make use of it as a protective only, or as a vehicle for oxide of zinc, sulphur, ammoniated mercury, etc. It makes a much better mixture with them than collodion.

Powders.—It is sometimes found that in the second stage of eczema, ointments and lotions of every kind increase the irritation, and add to the discomfort of the patient. Fortunately these instances are rare, but when they are met with simple or medicated powders will sometimes prove of service. Starch,

lycopodium, ordinary toilet powder or talc may be used alone, or oxide of zinc, or sub-nitrate of bismuth may be used with either of them. It is in these cases that the dry powdered oleate of zinc often proves useful.

Soaps.—Of these there are three principal sorts of use in eczema, namely, soft soap, hard soap, and tar soap. Soft potash soap, equivalent to the sapo viridis of the pharmacopœia, contains an excess of alkali, and is used for the reduction of infiltration. Hard soda soap, prepared for laundry use, also contains a large amount of free alkali, and may be used for the same purpose. Tar soap is of service in the third and scaly stage of the disease.

Certain *mechanical* means are sometimes employed in the treatment of eczema. A few years since wrapping the part in vulcanized rubber was much lauded, especially in eczema of the hands, with a view to keeping the parts moist and macerating the thickened epidermis in the secretions of the part. This method is sometimes useful. The application of rubber, however in the form of an elastic bandage often proves of the greatest service in thickened eczemas of the lower extremities. Here the object sought is steady pressure with a view to produce absorption of the infiltration. The silk elastic stocking may be used for the same purpose.

Sometimes localized patches of eczema of long standing fail to yield to any of the ordinary means for

their relief, and necessitate the most vigorous interference. Thorough scraping of the surface with the curette, scarifications and even applications of the actual cautery may be advisable.

Antipruritics.—One of the most distressing features of many cases of eczema is the intolerable itching that frequently accompanies the disease. It is the symptom of which the patient complains the most. An application that will in all cases relieve the itching has long been sought, but, unfortunately, has not yet been found. In a minority of cases only is it possible to materially subdue the pruritus, though in many a certain measure of relief may be afforded. Twenty to thirty grains each of camphor and chloral rubbed together and then incorporated with an ounce of simple ointment or with the special ointment it is proposed to use, may be tried. If the surface is much inflamed and exuding this application will give great pain and increase the trouble. Three to five grains of carbolic acid, twenty or thirty of balsam of peru, a drachm of fluid extract of stramonium, a few drops of dilute hydrocyanic acid, half a grain of corrosive sublimate, or ten to twenty drops of chloroform, with each ounce of ointment, may be tried in turn, but without expectation of affording much if any relief; at least such has been the author's experience. The pruritus ceases when the eczema gets well, and not, as a rule, until then.

CHAPTER V.

TREATMENT OF THE SPECIAL FORMS AND VARIETIES OF ECZEMA.

Bearing in mind the general principles that underlie the treatment of all cases of eczema, we will consider the special treatment of the varieties as influenced by age, degree of inflammatory action, locality, etc., commencing with *eczema capitis* of young children.

In eczema of the scalp we frequently and perhaps generally find the case acute as regards its character, though it may be chronic as regards the duration of time that it has existed. It is almost always presented to us in the second stage, characterized by exudation and crusting, and perhaps complicated with enlarged glands at the back of the neck, small abscesses on the scalp, and perhaps also accompanied with pediculi. The vesicular or pustular forms are the most common, and the crusts entangled and retained by the hair accumulate more thickly than elsewhere. In dispensary practice the scalp often seems a mass of animated filth, fetid and disgusting to an intense degree. The first thing to do is to cut the hair as short as it is possible to do it with scissors. If pediculi are present, search through the entire scalp for their ova, which will be found attached to the hair. These hairs should then be cut off, or if the trouble is at all general,

it will be better to clip the entire scalp. This may be done with scissors, or better with clippers. If many crusts adhere to the scalp after clipping the hair, saturate the parts with olive oil, and after a few hours give the scalp a good washing with soap and warm water, and remove so far as possible all crusts. After drying, apply zinc or diluted white precipitate ointment. The ointment should be renewed daily, or even twice daily, and crusts and accumulations of old ointment be removed by gentle use of the comb, as often as necessary. The scalp should not, however, be washed again for several days; in fact, the less frequently it is washed the better. If abscesses are present, they must be opened, and perhaps poulticed for a day or two. Eczema of the scalp in many cases appears to be called into being as a consequence of parasitic irritation, and when the eczema is limited but the parasites numerous, cutting the hair may be avoided, and the first point of attack will be the insects themselves. I know of nothing more effective than drowning them out with kerosene. If the scalp be thoroughly saturated with this for two or three days in succession, soap and water, and a fine tooth comb, will do the rest. The parasites destroyed, the eczema may recover spontaneously, or more quickly if aided by a few applications of ointment.

In general eczema of the scalp, attended with a high degree of inflammatory action, with a tendency to suppuration, sulphide of calcium is probably the

best internal remedy that can be made use of. It should be administered in accordance with the rules already given. Later, viola tricolor, especially in subacute cases of long standing, will prove useful. The enlarged glands at the nape of the neck require no special attention—when the eczema gets well they will subside. Eczema of the scalp often extends to the face, and the forehead, cheeks and ears become affected. The ointment chosen should be sedulously applied, and as little water permitted to touch the parts as possible. If fissures form behind the ears, I usually add a little finely powdered graphite (plumbago, black-lead) to the ointment, or else, mix it with lycopodium. As the case progresses towards recovery, and the exudation and crusting cease, and the third stage characterized by dryness and scales, is ushered in, the treatment requires a change.

A little tar in some one of its forms should be added to the ointment, and the proportion of tar increased as improvement occurs. If progress towards recovery should halt, a tonic of iron, quinine, strychnine, or phosphorus, or of two or more of them combined, should not be forgotten.

Eczema of the scalp in adults, whether male or female, presents itself more frequently in a subacute than an acute condition, and very commonly in the dry and scaly stage, the patient complaining of a certain amount of irritation, and an excessive formation of dandruff. In this condition arsenic is frequently

of service, but the local treatment is of the utmost importance. If the same condition should be present on the non-hairy parts, tar would be the remedy first thought of. This, however, is practically impossible on the scalp, except for those who are willing to abandon social and business pursuits and to devote themselves entirely to their scalps. As a substitute for tar I have devized a mixture that appears to me to be fully as efficacious, it is free from the objectionable features of the other.

℞ Acidi salicylic, gr. x to xx.
Ol. lavandul, ʒ iiiss.
Ol. citronella, ʒ ss.
Ol. pini sylvestris, ℥ ij.
Ol. ricini, ℥ iss.
M.

In this preparation the salicylic acid is designed to restrict the formation of scales, the oil of the pinus sylvestris to act as a stimulant, and the castor oil to correct the drying effects of the latter. The lavender and citronella are simply perfumes, and any other may be substituted for them. The best way to apply this preparation is from a small oil can. The hairs having been separated, a few drops are applied directly to the scalp and gently rubbed in with the finger. All of the affected portions are gone over in this manner. To make the application perfectly and thoroughly, assistance will be required. If care be taken only so much oil as may be necessary is applied

to the scalp, and the hairs, except near the surface of the skin, do not become disagreeably impregnated with it. Application of the oil should at first be made daily, but usually at the end of a week the intervals may be lengthened. If at any time the eruption should revert to the second stage, with exudation, the oil must be abandoned and white precipitate or zinc ointment substituted. If the eczema has lasted any length of time, or if it is a frequently recurring condition, careful constitutional treatment is a necessity.

Eczema barbæ.—In eczema affecting the hairy portions of the face, the disease not infrequently descends into the hair-follicles and infiltration of the interfollicular tissue occurs. The most frequent form is the pustular, in which the follicles are the sites of the pustules. It is of the first importance that a correct diagnosis be made, and the affection differentiated from trichophytosis barbæ, which sometimes resembles it. This can usually be done at a glance, but sometimes the aid of the microscope will be necessary.

If the eczema be purely superficial, that is, if the inflammation have not descended into the follicles, it may be treated in the same manner as eczema of the scalp. If, however, it is sycosiform in character, with infiltration and pustules, epilation must be employed. Every hair on the affected portions must be plucked out with forceps. As a rule, they come out easily and without pain, as the inflammation has loosened the root-sheaths from their attachments to the folli-

cles. The necessity for epilation will be apparent when we consider the fact that the loosened hairs, while in the follicles, are playing the part of foreign bodies, and tending to keep up the inflammation. After epilation, white precipitate or zinc ointment should be applied thrice daily. Internally calx sulphurata, gr. $\frac{1}{10}$ to gr. $\frac{1}{5}$, three times daily may be given to advantage. In fact, this drug nowhere shows its power more strikingly than in sycosiform eczema.

Eczema of other hairy parts, as the axillæ, breast, or pubis, does not take on the sycotic character, and epilation is unnecessary.

Eczema of the genital region usually presents itself to the physician as a chronic affection of the scrotum, and most of the cases I have met with have existed for years before consulting me. The parts will usually be found red, dry, and thickened, and the site of more or less intense pruritus. At times the eruption becomes moist with more or less serous exudation. The most noticeable feature in long-standing cases is the great infiltration. Of all forms of eczema, this is the one which, in my experience, is the most difficult to manage. A well-known writer disposes of the question of its treatment in the following words:

"The treatment of eczema of the ger ital organs and anus does not differ from that of eczema in general, except in-so-far as we must bear in mind the predisposing causes, and endeavor to remove them if possible."

This general advice is good so far as it goes, but perhaps the most important of the predisposing local causes is the dependent position of the parts and their constant exposure to friction. As these causes cannot be wholly removed, we must confine ourselves to a partial mitigation of their effects. This can be accomplished in great measure by a properly fitting and snugly applied suspensory bandage. The bag may further be lined with rubber, and should be applied in such a way as to keep the parts as elevated as possible, with as much pressure as can conveniently be borne, being careful, however, not to constrict the upper part and impede the venous circulation. The rubber lining favors exudation and reduction of the infiltration. This, however, is not all. Active measures must be undertaken to reduce the infiltration. There are three principal methods by which we may seek to accomplish this end: First, by a few scarifications of the scrotum, permitting the parts to bleed freely, care being taken not to cut into any of the larger veins. After scarification the patient should sit for some minutes in a tepid antiseptic sitz-bath, to encourage bleeding and exudation. After the parts are dried a little tincture of benzoin, or a solution of iodoform, may be sprayed over them, and the suspensory be applied. In a week or two the scarification may be repeated. The relief afforded by this is sometimes surprising. Many patients, however, have such a dread of cutting operations about the genitals, that,

as a rule, some other procedure must be advised. The second means that we have at command is galvanization. The constant current applied daily, or on alternate days, will sometimes reduce the infiltration and relieve the itching. The testicles should be pushed well up, and the slack of the scrotum held between two good-sized sponge-covered electrodes. A current of from eight to twelve cells may be passed for from one to ten minutes. The strength and duration of the application will depend on the special susceptibility of the patient. The third method of reducing the infiltration is the one most commonly employed, and consists in the application of liq. potas. This should be mopped on with a small sponge or wad of absorbent cotton wrapped on the end of a probe. This application should be made by the surgeon himself and not entrusted to the patient. After its immediate effects have passed off, a little zinc ointment may be applied and the parts adjusted in the suspensory. From six to a dozen applications at intervals of from three to six days may be necessary. Despite these various measures the affection will not always yield as promptly as desired and the patient will seek advice elsewhere. Eczema of the penis sometimes accompanies that of the scrotum, but usually in a milder form and is frequently independent of it. When met with alone and in persons in middle or advanced life, and especially if the glans and inner surface of the prepuce is involved, the presence or

absence of glycosuria should be ascertained. If this condition is present, the parts should be carefully washed after each emission of urine in cases where the urine can come in contact with them, and an antiseptic lotion of boracic acid, hydro-naphthol, or the like applied. The general treatment should be that which is required by the diabetic condition.

Eczema of the vulva is rarely met with until the climacteric and later. In some cases it is doubtless excited by irritating uterine or vaginal discharges, but in perhaps the majority it is due to glycosuria. In either case the preliminary treatment is clear. The best local application in my experience is the peroxide of hydrogen.

Eczema of the *palmar* and *plantar* surfaces, frequently characterized by great thickening of the epidermis together with fissures, demands special treatment.

The epidermic proliferation must first be attacked with knife, file or sand-paper. After all that is possible has been removed in this manner liquor potassæ should be thoroughly applied, care being taken that none of it gains access to the fissures, if any be present. Several applications of the alkali may be needed. The fissures themselves will notably improve if dusted with graphite and lycopodium or graphite in ointment. If there be little infiltration of the derma, tar or its equivalent is indicated if the surface is dry with tendency to scaling, while some of the less stimulating

ointments should be applied if the surface be moist with exudation.

Chronic eczema of the hands is often exceedingly obstinate, and is one of the forms of the disease that seems to be benefited by impermeable dressings. India rubber gloves, then, worn at night should not be forgotten. This form of eczema is sometimes kept up indefinitely in women who are obliged to put their hands frequently into dish-water, etc. When this is the case the patient should be informed of the advisability of restricting herself in this respect, or of making such change in her avocation as will enable her to keep her hands out of water except when absolutely necessary for cleanliness.

Eczema of the leg is very frequently dependent on pre-existing varicose veins, and when such is the case is difficult to manage, unless the diseased veins can themselves be brought under control. If the varicose condition be at all severe, the general nutrition of the skin of the leg seems to suffer greatly, and a slight wound from scratching may degenerate into an ulcer. The cutaneous tissues, which are the site of the lesion, and for a considerable space around it, may be greatly thickened, and the surface present a bluish surface from impeded circulation. When this condition exists, the utmost benefit will be secured from the systematic use of the rubber bandage applied so as to bring firm but gentle pressure to bear upon the parts. The bandage should in the first instance be

applied by the physician, and the mode of its application be taught the patient. The bandage should, when practicable, be applied morning and night, and if it become soiled by discharges of any kind should be replaced by a fresh one, while the first is permitted to soak in cold water till again needed. After the leg has been restored to its normal size the bandages may be discarded, but an ordinary elastic stocking should be worn habitually. The direct remedial applications to be made will depend on the stage and condition of the lesion.

Eczema of the legs, however, is not always of the varicose variety, but sometimes presents itself as a chronic subacute circumscribed lesion, with or without notable infiltration. In the former case tar and the like is the application usually indicated. When infiltration is present it may usually be removed by the persistent application of potash; many times, however, it fails to yield to this, and severer measures must be employed. To this end a blistering application of collodion may be made, or croton oil, diluted perhaps with a little sweet oil may be rubbed in. The object of these measures is to excite considerable substitutive inflammation, which, when it subsides, leaves the parts in a condition disposed to heal. As an alternative scarification may be employed, and liquor potassæ may be applied to the scarified surface. This it must be born in mind is exceedingly painful. The scarification with or without the potash solution must

be repeated at the end of a week or ten days if necessary. When the infiltration and thickening have been dissipated, and there remains simply a raw exuding surface, the zinc or other ointments should be applied, to be followed by the tarry preparations as the progress of the lesion warrants.

Acute eczema of the leg demands quite different treatment. If the greater part of the leg, or both legs, are involved, rest in bed, or on the lounge, with the feet slightly elevated, is a *sine qua non*. The parts are red, hot, swollen, with more or less of the stratum corneum gone, and exuding. In this condition absolute rest must be enforced; it may be for a week; it may be for two. Unless the patient consent to this, make him no promises. After he is fairly anchored, apply lotions—black wash, lead and opium, or peroxide of hydrogen. This latter of properly graduated strength should be applied three or four times a day with an atomizer. The tube of the atomizer should be of glass.* If the exudation be profuse and the weather warm, the odor may be offensive. The peroxide produces complete deodorization, instead of substituting one bad smell for another as would be the case with carbolic acid, iodo-

*If the ordinary atomiser with silver-plated brass tube be used, the fluid will become of a pale bluish color, and the portion of the tube that dips into it will be deprived of the silver and show a bright brass surface, when the adhering oxide is rubbed off.

form, etc. Immediately on the application of the peroxide a fine white froth will appear whenever the surface is denuded of epithelium. After two or three days, as a rule, the extent of denuded surface will be found greatly lessened, and over a great part of the lesion a condition of extreme dryness with large semi-detached scales. These partially adhering scales should not be removed by traction, but their loose edges carefully trimmed with scissors. When this condition is reached the period for ointments has arrived, but I do not like the officinal zinc or white precipitate as well as a cerate made as follows:

℞ Ceratum cetacei, ℥ iv.
Tinct. benzoin, ℥ ss.
Hydronaphthol, gr. v.
Zinci Oxidi, ʒ iij.

M.

This should be evenly spread on old linen, and retained by bandages or adhesive plaster. Unna's salve muslins make admirable dressings for this condition, and may be readily extemporized by thickly impregnating gauze (the kind used for antiseptic purposes) with the above or any other desired cerate. If the case proceed favorably, the dry and scaly condition noted will give way to a surface still dry but in which the scales are much finer. The patient by this time will probably desire to leave his bed and attend to his daily business. This he may be permitted to do, provided the dressings are applied, and the whole

covered with a snugly and evenly applied bandage, or still better with a silk elastic stocking. As the color fades from the affected skin, the use of tar or its equivalent may be commenced. During all this time washing the parts should be abstained from as much as possible. Any old or adhering cerate should be removed mechanically rather than with the aid of soap and water, as the tincture of benzoin and the hydronaphthol will prevent the cerate from becoming rancid. As the case approaches completion the cerate is entirely dispensed with and slight friction at night with the mixture of ol. ricini and ol. pini Sylvestris, will be all that is necessary. The elastic stocking should be worn for some weeks after the skin seems entirely sound and well.

Eczema of the *inner surface of the thigh* from the groin to the knee frequently assumes the papular form, accompanied with considerable irritation. In this condition a salve-muslin impregnated with zinc cerate, or with diachylon ointment and kept in constant contact, will usually afford great relief. As the papules and the color subside, a little tar should be added.

Eczema of the anus is an insidious affection, and is frequently of long standing before it is brought to the attention of the physician. Thickening and fissures often co-exist, and the latter should first be healed, by cauterization, peroxide of hydrogen, graphite ointment or powder, etc., before attempt is

made to reduce the infiltration by strong alkaline applications. The irritation produced by applications of liq. potassæ is greatly mitigated by diachylon ointment or zinc cerate. One of the most effective applications to the fissures, and by no means the most painful, is the fine point of a Paquelin cautery, at a white heat.

Eczema of the mammæ and nipples is a very frequent accompaniment of scabies in the female, and when met with, the latter disease should be suspected and carefully sought for. As the eczema is due to the irritation of the parasite, the insects must first be destroyed. I know of nothing more effective for this purpose than the alkaline sulphur ointment, to which iodide of potassium has been added in the proportion of a drachm to the ounce, afterwards zinc cerate.

The so-called "Paget's disease of the nipple" so closely resembles an eczema of the part, that an accurate diagnosis is extremely essential. Eczema surrounding the nipple is readily curable, while Paget's disease is rebellious to all simple measures of relief. It is removed only by vigorous cauterization or excision. When left to run its course, it terminates in mammary cancer. Hence, the importance of its early recognition.

In obese persons, an eczema may arise from the irritation produced by confinement of the cutaneous secretions by over-lapping folds of skin, as under pendulous breasts, and in the groin between the thigh

and scrotum, or thigh and vulva. In these situations simple dusting powders, with separation of the parts by folds of linen, will often accomplish all that is desired. If there be much secretion, a small quantity of tannin may be incorporated with the powder, and if fissures are present, graphite should be added. If the surface be decidedly deprived of epidermis, the zinc oxide cerate should be used.